



Warfighter - Centered Design

Facilitator Course

Revised July 2020, by the Centers for Adaptive Warfighting, Naval X, Assistant Secretary of the Navy for Research, Development, and Acquisitions, from the original *Illuminate Facilitator Guide* by LT John Hawley, USN.

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GENERAL INFORMATION

CENTERS FOR ADAPTIVE WARFIGHTING (CAW)

MISSION

Provide courses which enable implicit learning and discovery through rapid iteration, intuitively sparking innovation balanced with sound judgment and decision-making skills in order to increase the warfighters ability to make effective decisions in any environment.

CAW training arms Warfighter-Centered Design (WCD) facilitators with tools to support elements of any size, from small teams to large organizations, towards accelerated innovation.

WARFIGHTER-CENTERED DESIGN

PURPOSE

Empower warfighter(s) and supporting agencies to work collectively / collaboratively in formulating rapid solutions which address the core needs of those impacted, resulting in increased efficiency and lethality across the force.

WHAT IS WCD?

A colloquialism of Human-Centered Design (HCD), is a creative approach to problem solving, a philosophy which empowers groups of people to collaborate in the design of products, services, systems and experiences primarily focused on addressing the core needs of all those affected by the problem. WCD was specifically designed by warfighters for warfighters through precision formulation of HCD, Design Thinking, Creative Problem-Solving Cycle, and Brainstorming. Collectively, and through multiple iterations of exploring - discovering - refining -testing - implementing - [iterate], Warfighter-Centered Design has evolved into a process that supports the needs of the warfighter and those in support of.

PROVIDES THE WARFIGHTER

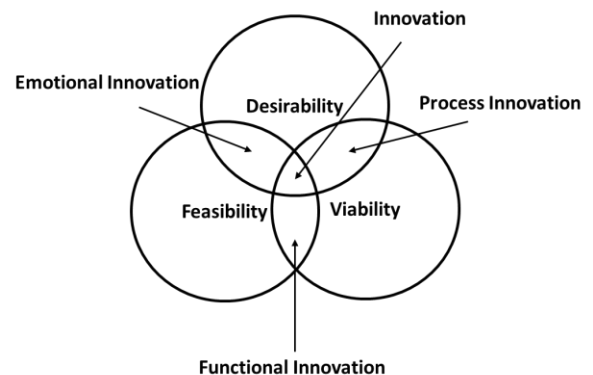
- A system which encourages self-awareness of personal factors such as egos and bias, breaking down the barriers enabling warfighters to overcome friction.
- An opportunity to collaborate, share ideas through a process that encourages warfighters view situations and information objectively and unemotionally.
- An intellectual edge based on knowledge and experiences.
- Rapidly identify problems through multiple layers of perception.
- Problem framing, mental imaging, critical thinking, analysis, reasoning, and problem solving through a rapid cyclic process
- Continuous exploration of new ideas.
- Methods that have limitless applications.

COMPOSITION OF WCD

DESIGN THINKING PRINCIPLES

In order to ensure innovation discovery is staying on target, teams should constantly use the design thinking principles.

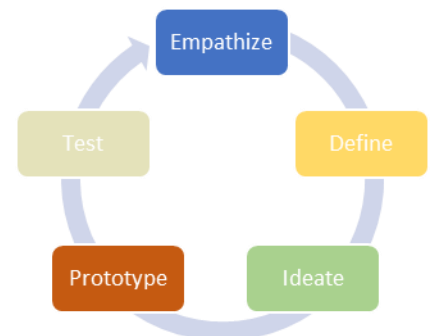
- **Desirability** (people)
 - Ensures a desirable experience
 - Does it meet the needs of those affected?
- **Feasibility** (technical)
 - Optimizes operational efficiency
 - Is the idea feasible?
- **Viability** (business)
 - Maximizes operational effectiveness
 - Is the idea attainable?



PROCESS OF DESIGN THINKING

In order to maximize quantity and efficiency, facilitators must understand the design thinking process, when and where to apply techniques and identify pivot points. The design thinking process serves as the basic cyclic process within WCD. The process in its entirety is cyclic, various steps within are iterative throughout.

- **Empathize:** Know your audience, discover their pains. Understanding and addressing the core problem(s). Solve the fundamental, underlying issues, not the symptoms.
- **Define:** Understand the needs and capabilities, consider the warfighter and all involved. Understand the human connection between different yet supporting or supported agencies. Frame their pains into opportunity statements.
- **Ideate:** Utilizing an activity-centered systems approach, focus upon the entire “thing” under “construction”. Fixing the immediate problem may not fix the bigger problem, identify the connectors, or what “things” support or influence the problem. Through limitless iterations of divergent to convergent thinking, warfighters rapidly discover and hone in on precise solutions for new ideas, areas of concern, and impediments.
- **Prototype and Test:** Rapid iterations of prototyping and testing. The first solution recommendations are rarely the last, the process is cyclic. Practitioners of Warfighter-Centered Design are more likely to participate and accept repeated testing more so when it is understood that it is a trial not a final forced solution. Does it align with the principles?
- **[Iterate]:** Repeat the cycle



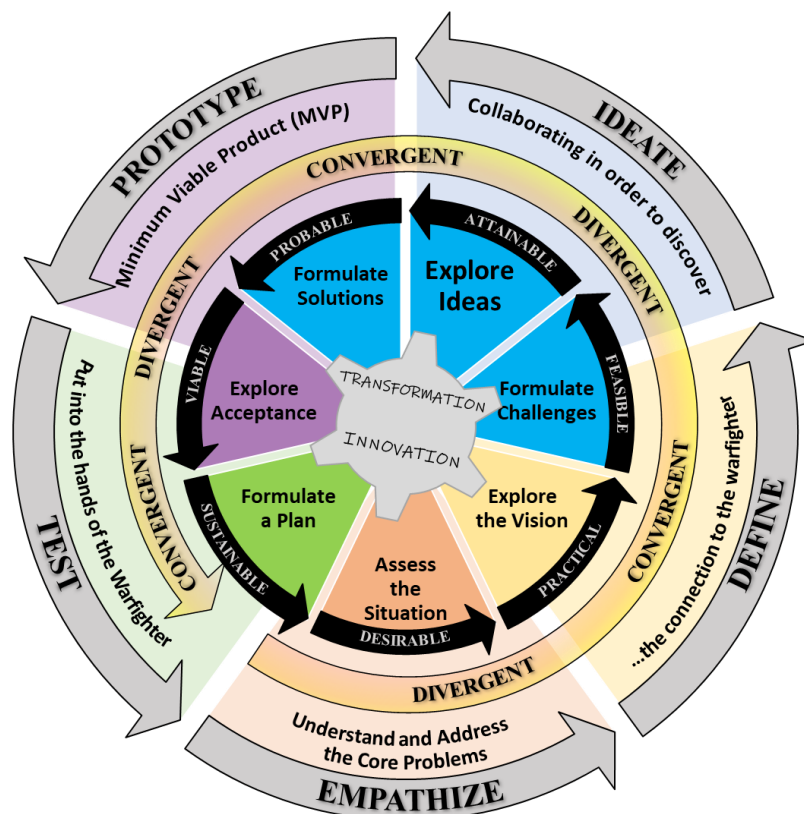
BRAINSTORMING

...is not a design system or process rather it is the divergent thinking mechanism within the design thinking process. Primarily found in the Emphasize, Define, and Ideate steps but certainly not limited to.

...is not a group of individuals generating ideas in a disorganized manor, rather it does at its core, generate many ideas in a barrier free, divergent method.

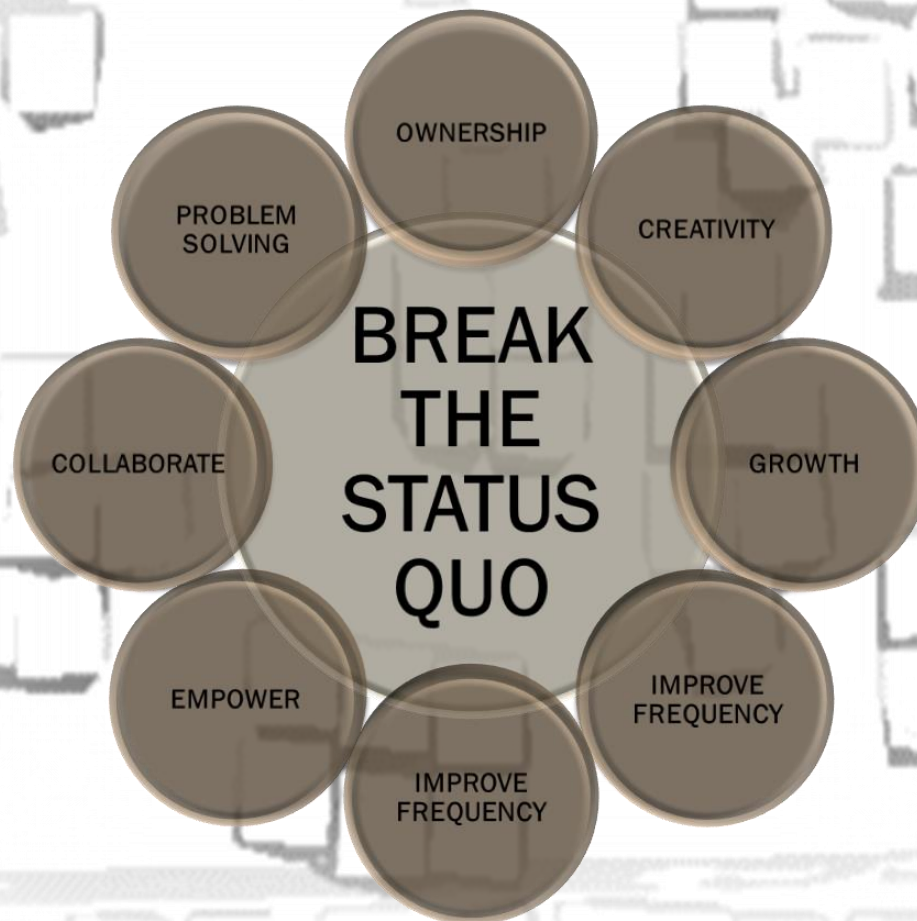
Principles of Brainstorming

- **Defer Judgment.** Divergent thinking is about the free flow of ideas, no idea is bad, no idea is perfect; collectively they will likely formulate a near perfect idea / solution.
- **Combine and Build.** One's idea may inspire another's. Use them collectively to improve the ideas.
- **Seek Wild Ideas.** Stretch the imagination beyond what seems unreasonable. Allowing yourself / others to think "outside the box" provides room for extraordinary discovery.
- **Quantity [over quality].** Maximize the tools within in order to generate a substantial quantity of possible ideas /solutions. Through utilizing these tools, quality will present itself through quantity.



COURSE OBJECTIVES

- **Improve Frequency** through **Rapid Iteration**
- Creates a sense of **Ownership** of work through trust and **Empowering** the Warfighter
- **Breaks the Status Quo** – **Improving** and **Increasing Efficiency** through rapid and cyclic Problem Solving.



The Center for Adaptive Warfighting (CAW) team believes in empowering leaders and warfighters by delivering industry best practices for complex problem solving and ideations, in order to exponentially increase velocity and productivity across all levels of the Force. For the CAW to ensure continued success and maintain the status of a highly sought-after course, our facilitators must have certain attributes. The ideal characteristics of a WCD Facilitator are, but not limited to the following;

- Top performer, high energy, a desire and passion for working with others.
- Ability to perform and or speak to large groups and senior leaders.
- Attentive. Much of a facilitator's work requires their ability to "read the audience" and make appropriate adjustments.
- Decisive, adjusts the agenda on the fly when required.
- Creative. Occasionally, the participants do not understand the curriculum. WCD is malleable, the facilitator may need to adjust instructional methods to meet the audience's learning needs.

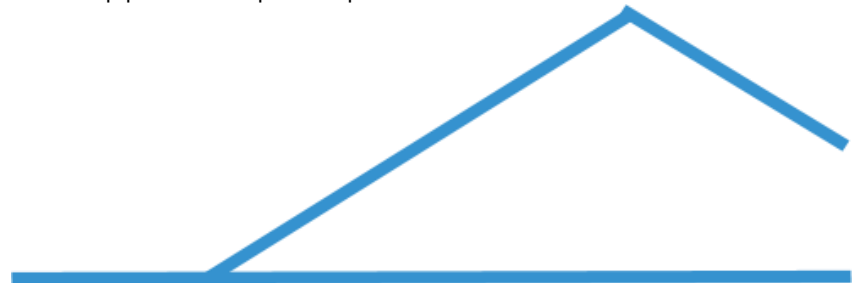
- Must have formal training from the CAW or Naval X WCD Facilitators before training additional facilitator training courses.
- Each facilitator must apprentice with a qualified facilitator through one full WCD Course before teaching as a qualified facilitator.



LOGISTICS

FACILITY REQUIREMENTS

- Space for 1:3 student facilitator to practical application participant
- Open floor plan
- table, preferably round, per team with (1) chair per person
- Adequate restroom space
- Media Connection
- Lounge Area



SUPPLIES

- 3" x 3" (100) page Post - it Notes (sticky pads)
 - Yellow: (100) individual pads
 - Red: (25) individual pads
 - Green: (25) individual pads
 - Blue: (25) individual pads
- (200) Fine tip Sharpie Permanent Markers
- (16) Multi-colored dry erase marker sets
- (20) rolls of 1" Blue Painter's masking tape
- (20) rolls of 1" masking tape
- (7) Easel Stands
- (5) 25" x 30" post it sticky easel pads
- (4) 48" x 200' roll of white craft paper
- (4) 48" x 600' roll of brown shipping wrapping paper, 60# (butcher block paper)
 - 3000 count, 0.375 Round Color Coding Circle Dot Stickers
- Certificates
- Certificate Folders
- Any items required for specific exercises (see Supply Requirements within module)



PRE-START PREPARATIONS

- Agenda Posted
- Scrum board (optional)
- Rules of the mountain exercise on stickies
- (2+) Zombie Exercise stickies
- Have all paper pre-cut and at the ready
- Presentation Posters

Black Log		To Do		Doing		Done	
AAR	Rose Bud Thorn	Group Ice Breaker	Intro	Scrum Board	Say hello	Facilities	Supplies
Lunch	Presentations	Mountain Rules	Straw Poll	POST THE AGENDA		CHAIRS	Set up
		Zombie	Mountain			Tables	
		PICK	Affinity Diagram				
		Bob Ross	Democracy				

	Agenda		
Facilitator	Start Time	End Time	Notes
	Facilitator Set-up		
	Facilitator Warm-Up		

GETTING STARTED

FACILITATOR WARM-UP

Perform a set of icebreakers amongst the facilitators prior to the start of class. This will ensure the facilitators are starting the class with a higher rate of energy.

Finesse: Facilitators require a high level of energy for the body and mind. It is important that the facilitators are energized prior to engaging the class.

OPERATING AGREEMENT

Stay on task, stay on time.... *Warfighter - Centered Design* combines Human - Centered Design courses with warfighters, equipping them with the necessary tools for finding, framing, and co-designing solutions to unspecified problems.

RULES

- Be on Time, Stay on Time
- Hands up for silence
- Jargon Giraffe
- Rabbit - hole fingers - Use Time Wisely
- First names
- One Conversation
- Cell Phone



INTRODUCTION

WELCOME

- Short Intro... First name, where you work, what you do.
- We will learn more about each other throughout the course
- “This is an abbreviated version of WCD which is an abbreviated version of Design Thinking”

“you’re getting the “Hitch Dance” version of design thinking, eventually you may want to work your way up to the “Q-tip”. ” ...Jon Margolick

ICEBREAKERS

Ice breakers are ways to get team members to know one another through various methods designed to break through social norms, encourage interaction, and enhance team building methodologies.

Choose one (or more if time allows) Ice Breakers.

ROCK, PAPER, SCISSORS

A fun twist on the popular rock, paper, scissors game. This will demonstrate the power of exponential growth and develop teamwork.

HOW TO PLAY:

- Ask participants to spread out and find a partner. Each pair plays a round of Rock, Paper, Scissors. The losing player then stands behind the winning player and enthusiastically cheers for that player by name
- This new team then finds another team to play a new round of Rock, Paper, Scissors. Each time a team wins, it collects the other team's players, and they line up behind the unbeaten leader
- At the end, there will be two large teams, led by the unbeaten leader in front. After the final match, the celebration begins!



RULES:

- Rock breaks Scissors, Scissors cuts Paper, Paper covers Rock
- Each round is played on the count of three

SUPER POWERS

- Share your name
- Share a skill you are proud of
- Share a superpower you wish you had and why
- Pass out name tags: (optional) - label with superpower



RULES:

- May not use the same super power twice

DESERTED ISLAND

- The situation is dire — following a shipwreck, the entire class has been stranded on a deserted island.
- Everyone gets to choose one item to keep with them as the ship sinks. Items do not need to be realistic
- What would you choose to keep?



STRAW POLL

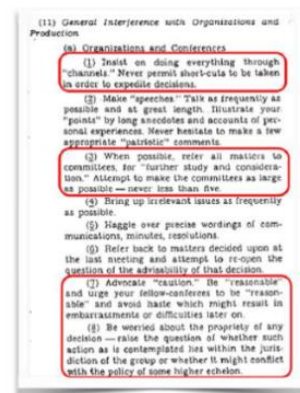
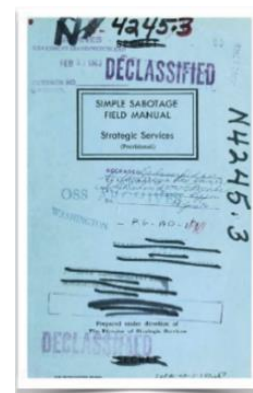
OSS SIMPLE SABOTAGE

...is meant to show that there is always room for improvement and everyone has the power to impact change.

- Have the class gather around
- Inform the participants that several statements are going to be read. If any of the statements relate to something, they have experienced in the work place, ask them to nod or raise their hand.

(The facilitator should nod their head and raise their hand after each statement in order to encourage class participation.)

- Read the following statements and pause after each statement to allow participants to nod or raise their hand.
 - Haggle over **precise** wordings of communications, minutes, resolutions.
 - Bring up **irrelevant** issues as frequently as possible.
 - Hold conferences when there is more critical work to be done.
 - Insist on doing everything through "**channels.**" Never permitting shortcuts to be taken in order to expedite decisions.
- Tell the class the following: "If you know 100% where these statements came from, I ask that you not say it until the end to let the rest of the class participate. If you think you know where these came from, raise your hand."
 - Allow participants to share their ideas for where the statements are from.
- Tell them, "These statements are from the **1944 OSS Simple Sabotage Manual**. We gave these manuals to our agents and inserted them into foreign governments to sabotage them."
- Begin conversation: "If our agents did this to foreign governments to upend them, why do we do it to ourselves?" Talk about the remainder of the day and how you are going to give some tools to help minimize these events from occurring in the future.
- *This exercise is typically reserved for the more senior participants.

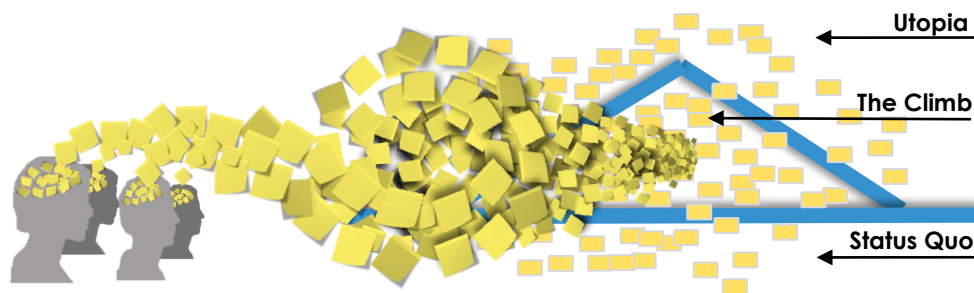


CLIMBING THE MOUNTAIN

This module provides a summary of the collective opinions (divergent thinking) of the participants to areas such as their command or organizations. This exercise is meant to show collective opinions, good and bad, and quick ideas on how to improve. The mountain exercise focuses on the three steps of the WCD design thinking cycle, **Empathize**, **Define**, and **Ideate**.

DIVERGENT THINKING

A thought process or method used to generate creative ideas by exploring many possible solutions. It typically occurs in a spontaneous, free - flowing, "non-linear" manner, such that many ideas are generated in an emergent cognitive fashion. The three steps of *Climbing the Mountain* require **divergent thinking** coupled with *Intuitive Thinking* which is, "Rapid, Automatic, and Passionate".



CARE AND FEEDING OF STICKIES

- No conversations. Focus!
- 4 - 6 words per sticky
- All CAPS
- BLOCK LETTERING
- Pictures are great
- Face the group and read the sticky

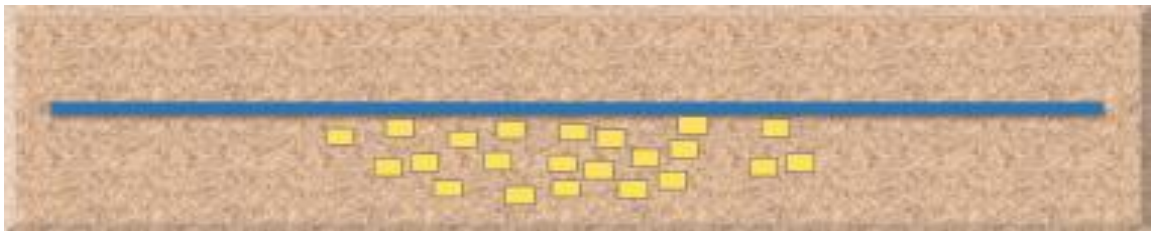
STATUS QUO

- Have the class get a marker and a pad of stickies, and gather around the facilitator near a wall.
- With blue painters' tape, create a horizontal line on the wall.
- Inform the class the line represents '**status quo**'. These are their **pain points** with things as they are. What's not working? Underneath the line, they post ideas, big or small, which represent the status quo / barriers in regards to the Topic Question.

- Characteristics of their environment not meeting the mark
- Policies or rules they do not like, unfair, do not have enough of, too much of something.

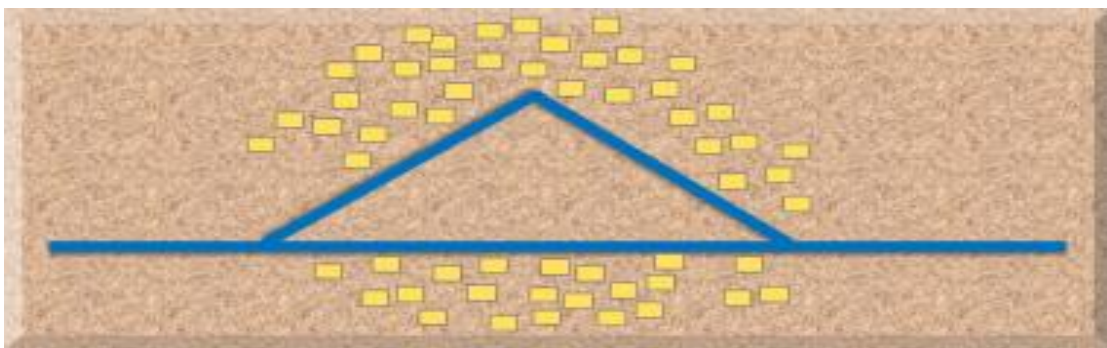
*THE ONLY WRONG/BAD/ ANSWERS are the ones not on the board.

- Have each participant write down one **status quo** before starting the exercise, that way it begins immediately with lots of stickies and no one feels uncomfortable by going first.
- Once 15+ stickies per person are placed or approximately 12 minutes has passed, use the blue tape to create the 'mountain'



UTOPIA

- Inform the participants at the top of the mountain represents 'utopia'. They must write down characteristics of their "perfect" world, if the problem statement were totally resolved, and place these ideas at the top of the mountain. Give them a few minutes to do this.
- 5+ stickies
- If the group starts to slow, inform them that in order to move onto the next portion, "5 more people must add stickies". More ideas might also come to them if they take inspiration from the "status quo" stickies, or think through their experiences in the last couple of months.

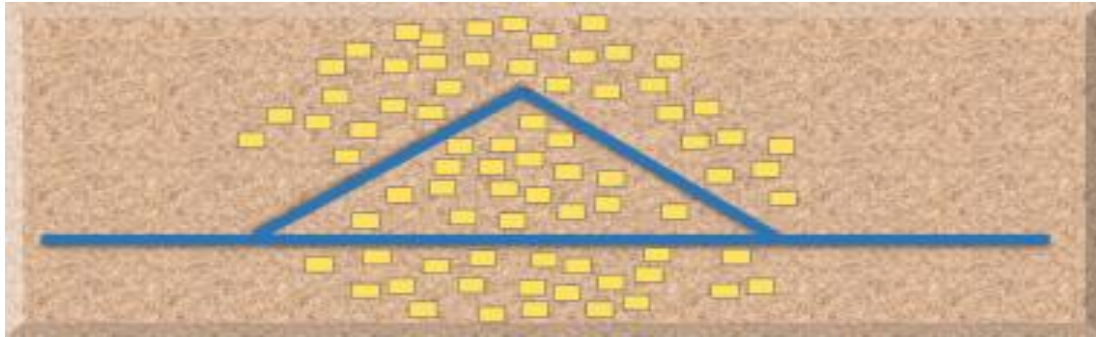


THE CLIMB

- Inform the participants the inside of the mountain represents the "climb". They must write down things that get us from the *status quo* to their *utopia* at the top of the

mountain. Give them a few minutes to do this. This can be a specific example of something that is holding them back or a barrier to remove to achieve the summit.

- (Optional) Once the participants have finished putting their stickies on the wall, tell them that at some point during the course, they should look at the wall. If there is anything on the wall that they have the power to change, tell them to think on it and make a mental note to try to improve that aspect of their organization.



Finesse for Climbing the Mountain:

This is a good exercise to establish your ground rules for the day if you have not done so already. There should not be any talking except for the person placing their sticky. Letting everyone know that this will begin as a slow process will help everyone to get comfortable sharing their ideas with the people in the room. They don't need to mention names or departments if they don't want to, but you should create a safe space for people to do so if they are able. Upon conclusion, ask the group why you just did this exercise. They will usually say, "To see what others are thinking" or "Realize you aren't alone in your drive to make the organization better." We can hear different sides of an issue... We may think ADMIN is super slow and we write a sticky that says "SLOW ADMIN" as the status quo and a few minutes later someone from ADMIN might add a sticky that says, "Not enough personnel, working until 1800 every day". When you go into the third section of this exercise, say, "if you have yet to put something on the board, I challenge you to do so before we finish."

TEAM BUILDING EXERCISE

This module is used to split the class into the groups they will be working with for the remainder of the course. The below exercise is designed to help remember names, encourage public speaking, and break down any communication barriers.

- Participants split into even groups of 5 or more with people they don't know and were not in any previous challenge with.
- Select a Team Building Exercise from one of the modules provided or choose from the internet.

BALL CHALLENGE

This exercise is meant to show the iterative process.

Note: Before you start this exercise, ensure you have a ball and a partner facilitator to time the exercise and record the times in a visible place.)

HOW TO PLAY

Have participants to spread out into the largest circle a room can support.

- Tell the participants they must pass the ball around the circle. Everyone must touch the ball once and always in the same order. The first round will be used to set that order, so it is critical that participants remember who they got the ball from and who they gave it to. You will begin by tossing the ball to someone in the circle and that person must then toss it to another person who is across the circle from them. Tossing it to the person directly beside them is not authorized. The last person to get the ball must toss it back to the facilitator. For the first round, tell participants to raise a hand to indicate that have not touched the ball. Once they receive the ball, they can drop their hand. Tell them to use their raised hand to help catch the ball; "Don't be a hero!"
- Run the first round, partner facilitator takes time and records it.
- After the first round, participants should now know who they received the ball from and who they gave it to and they must maintain the same order for the rest of the exercise. They no longer need to keep a hand raised.
- Run the exercise a second time, ensure time is kept, the time will most likely decrease.
- After the second round, tell the class to raise their hand if they have a suggestion that could improve the speed of the exercise. Ask them for a minor improvement. Execute the improvement and run the exercise again. Repeat this for two or three rounds.
- Following these "minor improvement" rounds, tell the class to raise their hand if they have a suggestion that could improve the speed using a bigger change. Execute the major improvement and repeat for two or three rounds, until the exercise lasts between 2-5 seconds.
- Ask participants why they think you did this exercise. From there, you can explain that it is the tacit knowledge in the group that continuously adds these small incremental

improvements over time to make your organization better. Any time you are stagnant, you should search for some small change to improve.

This inflection point (S-curve from left to right) was just demonstrated by the times in this exercise. It is not always about speed. This applies to quality in your workspace as well. You can also add that one person may think their idea is silly and won't mention it out loud. However, each idea and improvement build off one another and makes a big difference over time (your paradigm shifts or major ideas you had).

Finesse for the Ball Exercise:

It is extremely important that you ask the participants in the beginning to raise their hands indicating they haven't yet received the ball. Tell them that does not mean they must catch the ball with one hand. Repeat at least 3 times, **they must remember who they received the ball from and who they gave it to.** Ensure you give your partner facilitator a heads up when you are about to start each round to make sure they are ready to start the timer. Call "time" when the round ends. When asking for improvements, it is CRITICAL participants raise their hands to make a suggestion. Without this, everyone will talk over one another. As participants make suggestions, always act like it is a suggestion you've never heard. Always allow the individual to explain what they mean, even if you know what they mean. Allow them to explain their suggestion to the class. If someone suggests a large change when you are asking for minor improvements, say, "That is a great idea but a pretty big change. I'm looking for a minor change to shave off a couple seconds, so maybe we will come back to that." The general progression of changes normally goes as follows but can certainly vary depending on the class make-up:

- Initial round
- Second round with people knowing who they are throwing it to
- Minor change: Make eye contact or throw the ball underhand.
- Minor change: Make the circle smaller or take a step forward
- Minor change: Step out of the circle after you throw it and make the circle smaller
- Major change: Reorder the circle so you are standing next to the person you got the ball from and the person you are giving it to
- Minor change: Pass it around the circle with only one hand
- Major change: No longer pass the ball. Have the facilitator hold the ball and run around the circle touching the ball to everyone's outstretched hand.

PICK CHART

POSSIBLE – IMPLEMENT – CHALLENGE – KILL

A tool commonly used in Lean Six Sigma, originally created by Lockheed Martin, the PICK chart can be used to organize new or improve ideas and later categorize and or used to prioritize. In WCD the PICK chart is used to prioritize clustered and categorized opportunities based on impact and feasibility.

IMPACT VS. FEASIBILITY

...is used to assist groups with deciding which way to attack their opportunity statement and further refine their idea.

ZOMBIE - AN EXERCISE DEMONSTRATING THE PICK CHART

Follow the instructions below while utilizing scenarios for the practical application.

Purpose: The exercise is meant to assist with determining which of their ideas has the highest **impact** and **feasibility**.

Pre-set up: Pre-written stickies for chosen scenario.

Note: Words in the illustration are for the Zombie scenario. Wording will be different in the *Grandma's House* scenario, and while stickies may end up in slightly different order than depicted in the example, the general progression should be similar.

- Instruct the participants to gather around a wall or workspace. Explain that the next exercise is to demonstrate how to use the titles of the categories they created in the previous module.
- Provide the backstory for the **scenario**.

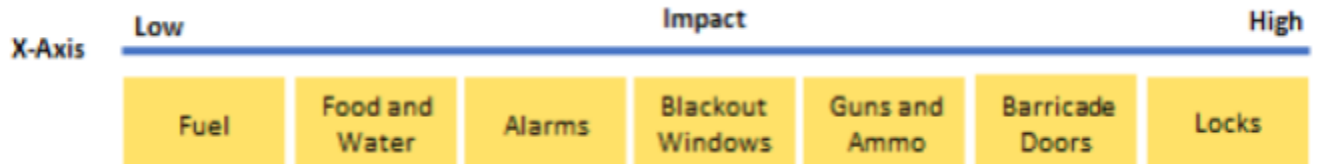
Backstory: News stations are broadcasting a national emergency. The zombie apocalypse has begun. Starting at sundown, the zombies will be out in full force and you need to protect yourself and your family in order to survive the night. At dawn, you will be able to re-evaluate and continue preparations. You have 5 hours to prepare for sundown and multiple things must be done to ensure your survival.

Impact: How does this affect me and my family's survival through the night?

STEP 1: (X-AXIS) IMPACT LOW TO HIGH

- X-axis represents **IMPACT**; the far left is **low** impact and the far right is **high** impact. Place the first problem sticky on the wall and tell the **impact** as detailed in the scenario. Take the second problem sticky, tell them the **impact** as detailed in the scenario, then say;

"Without speaking, give a thumbs-up if this sticky is more impactful or thumbs-down if less impactful than the first problem sticky."



- Place the second sticky based on the group's collective answer. (majority wins!!)
- Do the same with the remaining stickies ensuring to start the "more or less" with the farthest left sticky, providing the **impact** statement for each sticky.

- FOOD & WATER

Impact: You have enough food and water for approximately three days. You only need to get through the night.

- GUNS & AMMO

Impact: You need to be able to protect yourself and your family with weapons in the event you come face to face with a zombie tonight.

- ALARMS

Impact: You need some way to hear when the zombies have entered your property and are approaching your home.

- LOCKS

Impact: Locking all your doors and windows is the first level of defense hindering the zombies entering your home.

- BARRICADE DOORS

Impact: Barricading your doors provides second level defense hindering the zombies from entering your home.

- GASOLINE

Impact: You have a quarter tank of gas in your car. You will probably not use your car during the night.

- BLACKOUT WINDOWS

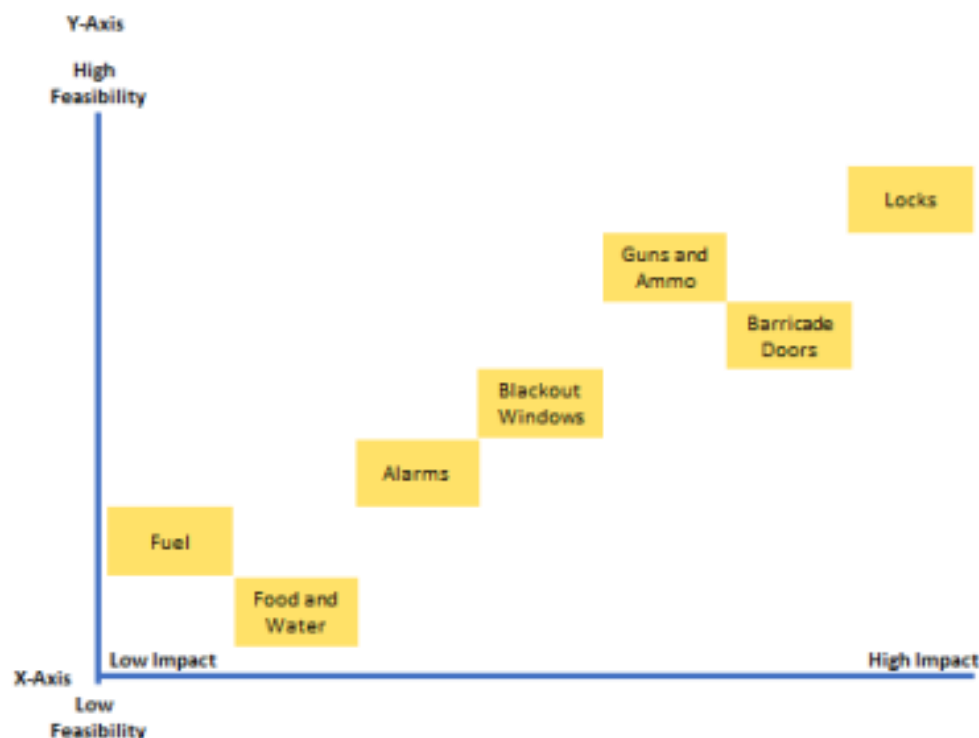
Impact: Light at night is like a welcome beacon to zombies. Blacking out your windows to ensure no light escapes could save your life tonight.

STEP 2: (Y-AXIS) FEASIBILITY LOW TO HIGH

- Y-axis represents **FEASIBILITY**; the most difficult, expensive, or time consuming being **low** (down on the axis) and the easiest, least expensive, least time consuming being **high** (up on the axis).
- The sticky farthest to the left on the x-axis will be the baseline. Tell them the sticky's **feasibility**, then pick up the sticky directly next to it, tell them the **feasibility** as detailed in the scenario.

Ask "Without speaking, give a thumbs-up if this sticky has a **higher feasibility** or a thumbs-down is **lower feasibility** than the baseline sticky?"

- Place the second sticky based on the group's collective answer. (majority wins!!)
- Do the same with the remaining stickies ensuring to start the "low or high" with the lowest sticky, ensuring to provide the **feasibility** statement for each sticky.



- FOOD & WATER**
Feasibility: To restock food and water, you need to drive to the grocery store and battle the frantic crowds to purchase the necessities.
- GUNS & AMMO**
Feasibility: You have a pistol on the highest shelf of your front closet and a shotgun under your bed. You need to pull those out and get all your extra ammunition out of the garage.

- ALARMS

Feasibility: You need to rig string and rope outside with bells and cans to ensure you hear when zombies get close.

- LOCKS

Feasibility: You have three doors that open to the outside of your home and 22 windows. You need to walk around your home and turn the locks.

- BARRICADE DOORS

Feasibility: You need to physically move large pieces of furniture; your couches, dressers, mattresses, etc. behind your three exterior doors.

- GASOLINE

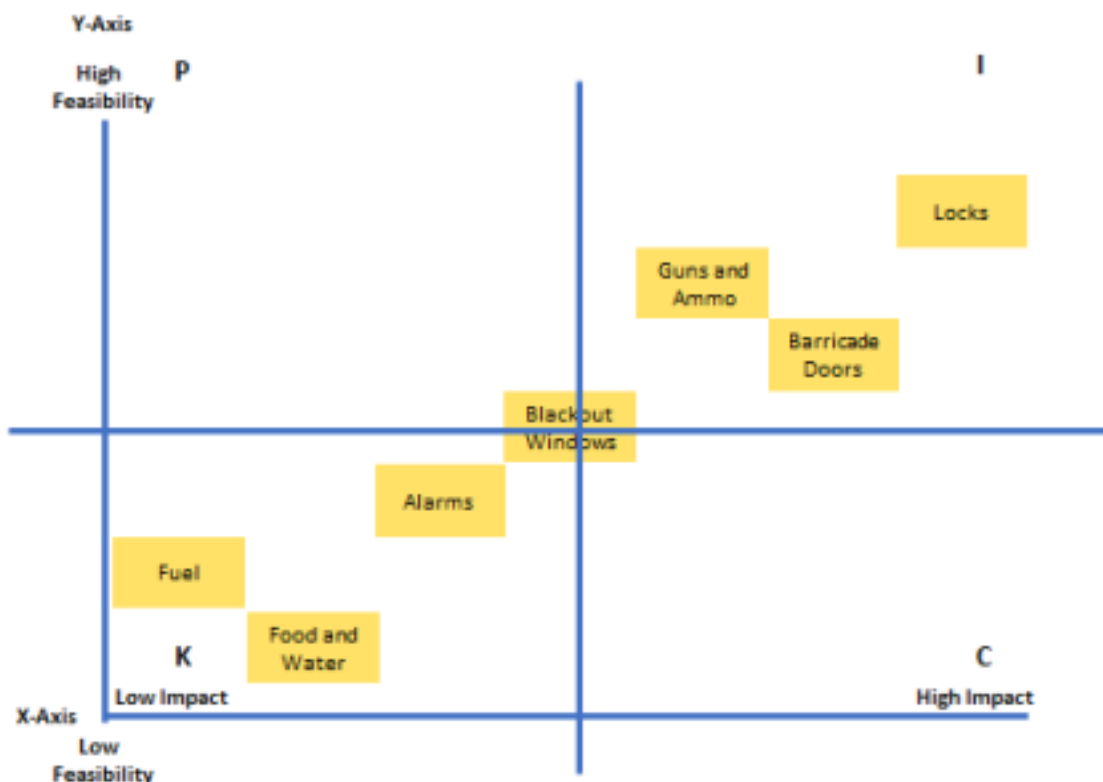
Feasibility: Filling your tank would require traveling into the mass hysteria and fighting the frantic crowds at the gas pump.

- BLACKOUT WINDOWS

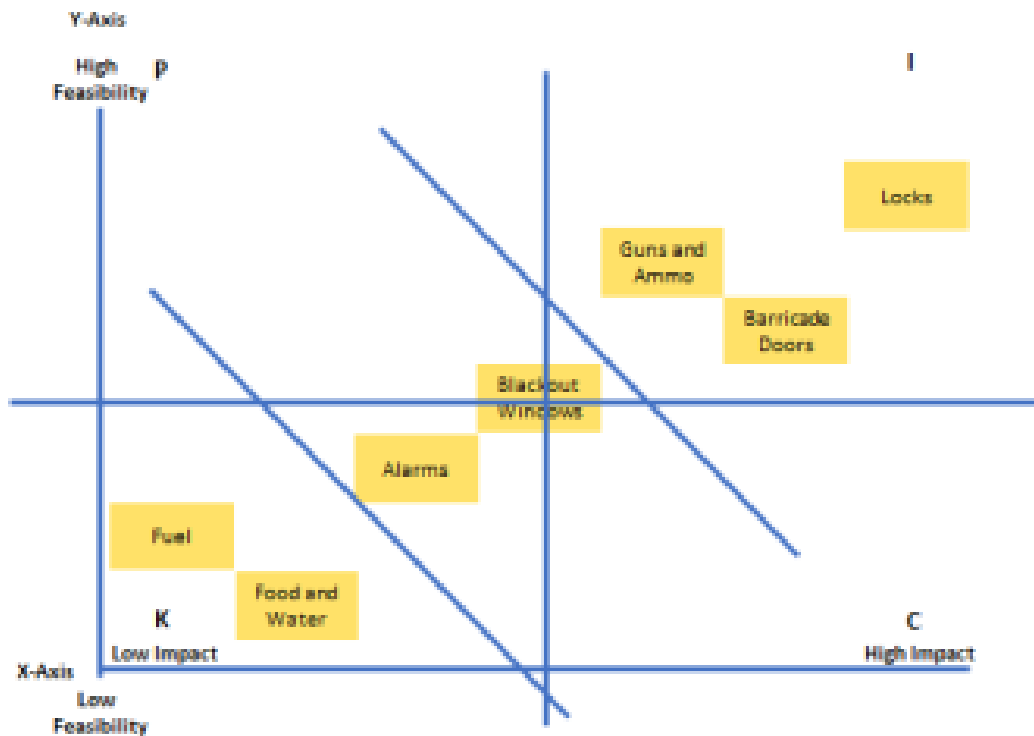
Feasibility: You need to get cardboard from your garage, sheets, and blankets, and duct tape them over the windows to ensure no one can see light escape into the darkness outside.

STEP 3: LABEL QUADRANTS

- Once complete, talk through the items at the top-right and explain how these are the things they should accomplish first.



WITH OPTIONAL PHASE LINES



Possible

High Feasibility / Low Impact

Implement

High Feasibility / High Impact

Change

Low Feasibility / High Impact

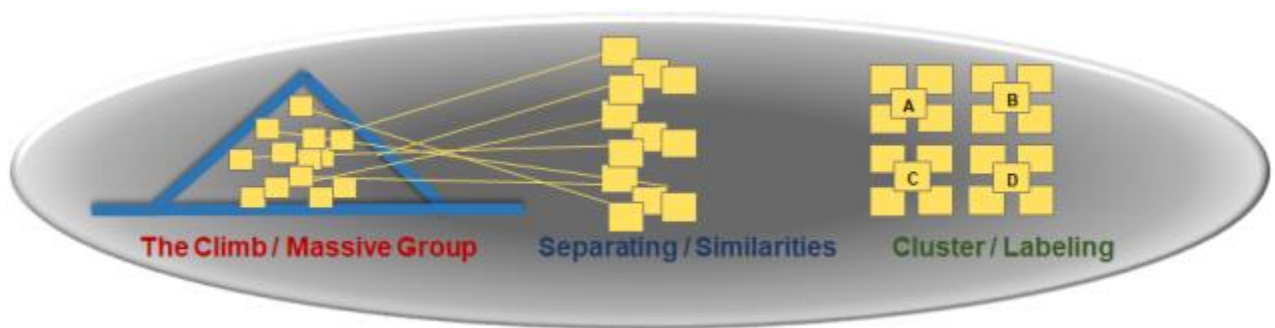
Kill

Low Feasibility / Low Impact

AFFINITY DIAGRAM

CONVERGENT THINKING

... is linear and systematic, taking multiple ideas generated from divergent thinking and turning them into attainable solutions.



STEP 1: MASSIVE GROUP

- Start with as **many ideas as possible** after brainstorming (divergent thinking) exercise. These stickies should be placed off to the far left or right of the wall this exercise is to take place.

STEP 2: SEPARATE OUT (CLUSTERING)

- Have the group form into a **single file line** and **silently** select **one** sticky at a time and place it into either its own cluster or an existing cluster, each time rotating to the back of the line after moving their one sticky.

NO TALKING UNTIL EVERY STICKY HAS A CLUSTER.

- If someone disagrees with where a sticky was placed, they can use their turn to move that sticky to the category they feel it belongs to. If another person disagrees on that movement, the sticky should be tabled until the group can talk. At that time, they may discuss where that sticky should be categorized.

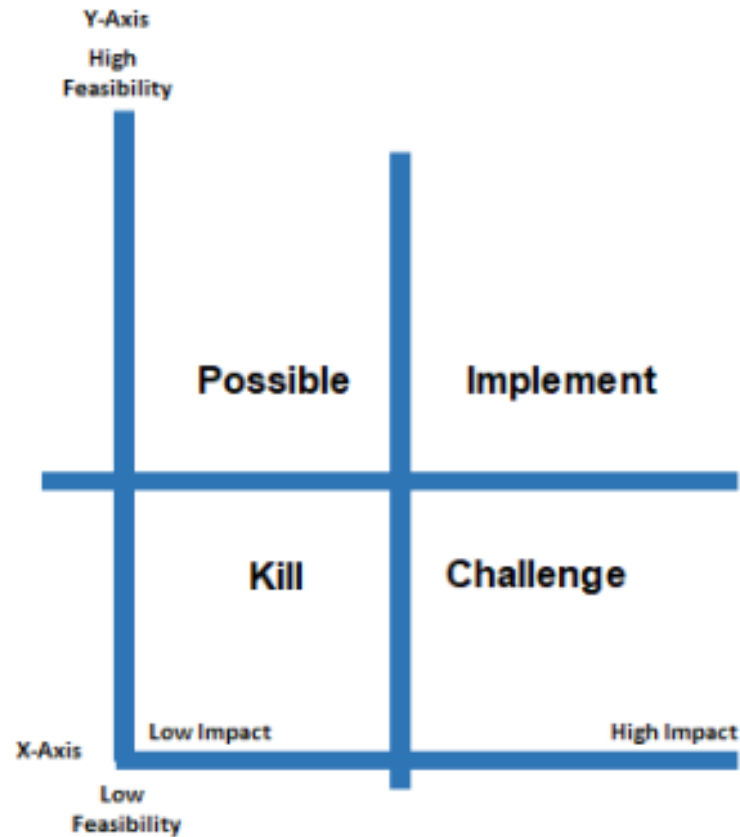
STEP 3: CLUSTERS (REFINING) / LABELING

- Once rough clusters have formed, there should be some discussion to resolve conflicts and to explain logic. Have the participants label the clusters.

Finesse for Convergent Thinking: Make it VERY CLEAR that there will be NO TALKING during this exercise. Utilize a line (wagon wheel) where all individuals take turns ensures each person in the group participates equally. Ensure categories contain no more than 10-15 stickies each. In the end, there should be about 5-8 main topics, groups, or nodes.

PICK CHART PRACTICAL APPLICATION

- Using the labels from the affinity clustering, utilize the PICK chart to determine impact and feasibility.



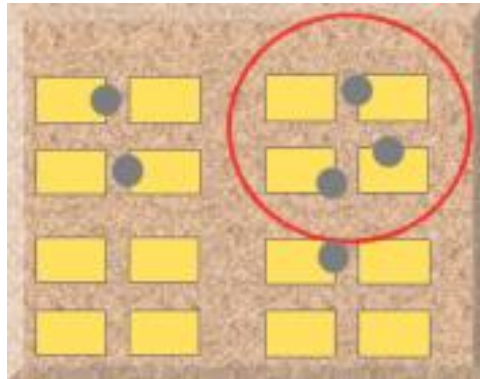
Why use a PICK chart to make decisions? "All estimates are wrong but some are useful."
 Capt Jon Margolick

DOTMOCRACY

... is a simple group activity that tries to recognize group preferences among limited options.

SELECTING THE CLUSTER TO WORK ON

- Each person is provided three sticky dots.
- They put sticky dots on any cluster-level sticky to vote.
- The cluster with the highest concentration of votes wins.
- Recommend everyone vote at the exact same time to prevent bias. Give them three minutes to decide where they'll put their stickies, and tell them that when time's up, they'll all tackle the wall simultaneously to affix their votes



YES, AND... EXERCISE

...opens the design thinking process by showing the difference between closed communication and open communication.

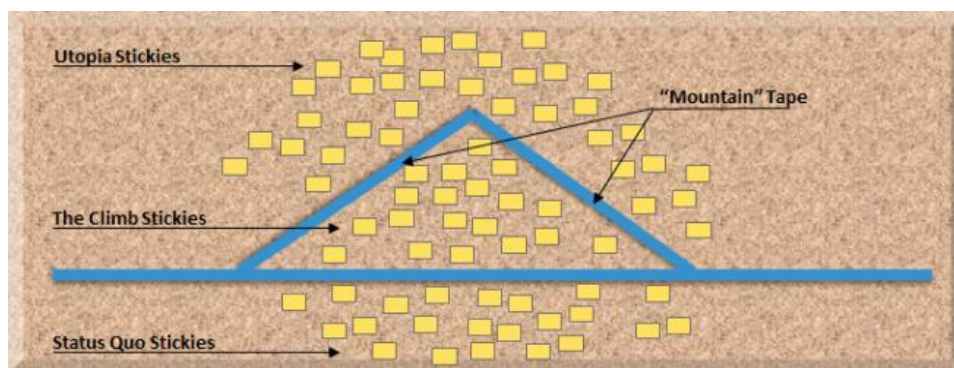
- Participants shall gather around to watch a demonstration by two facilitators.
- One facilitator will ask a question to which the other can only answer **"No."** They will try as hard as they can to get the other to say **"Yes"** but the answer must always be **"no"**. Run demonstration by having another facilitator ask their question **3 times**, and each time the response will be **"No."**
- Have participants partner up with someone they don't know very well and run this exercise. After 30 seconds, yell "Switch roles" so the person asking the question is now the person responding **"No."**
- Run another demonstration. This time respond with **"No, but..."**. The partner facilitator will ask their question 3 times, each time trying harder to get a **"Yes"**, and each time the response will be **"No, but..."** along with their counter.
- Have the group partner up again with a new person and run this question and answer exercise, this time using the response, **"No, but..."**. Again, yell "Switch roles" after 30 seconds.
- *Facilitate a brief discussion regarding the difference participants saw between the two different conversations. How did the "No" conversation differ from the "No, but..." conversation?*
- Run the final demonstration, this time the response will be **"Yes, and..."**. The facilitators will go back and forth responding to each other at least **3 times** each.
- Have the group partner up again and run the exercise with the response **"Yes, and..."**. There will be no need to say "Switch" since each person will be "yes, and"-ing the other person.
- *Facilitate a brief discussion regarding the difference participants saw between the three different conversations. How did the "Yes, and..." conversation differ from the "No" and the "No, but..." conversation whether you were asking the question or getting the response?*
- *Instruct participants: "You will use this yes-and mentality for the remainder of the course. Instead of shooting someone's idea down, they need to build on one another and only work in positives."*

TEAM PRACTICAL APPLICATION

This portion of the train the trainer is conducted in small teams. Follow the steps whether in the capacity as facilitator or as a student facilitator.

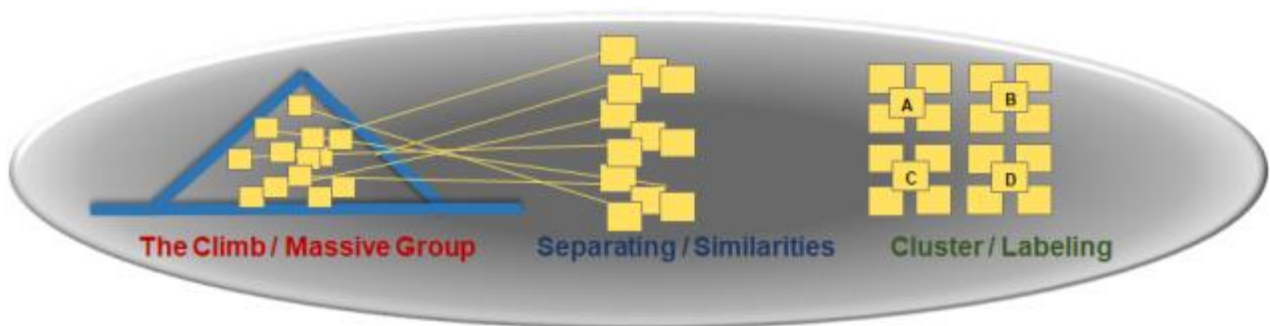
STEP 1: CLIMBING THE MOUNTAIN (DIVERGENT THINKING)

- Status Quo
- Utopia
- The Climb



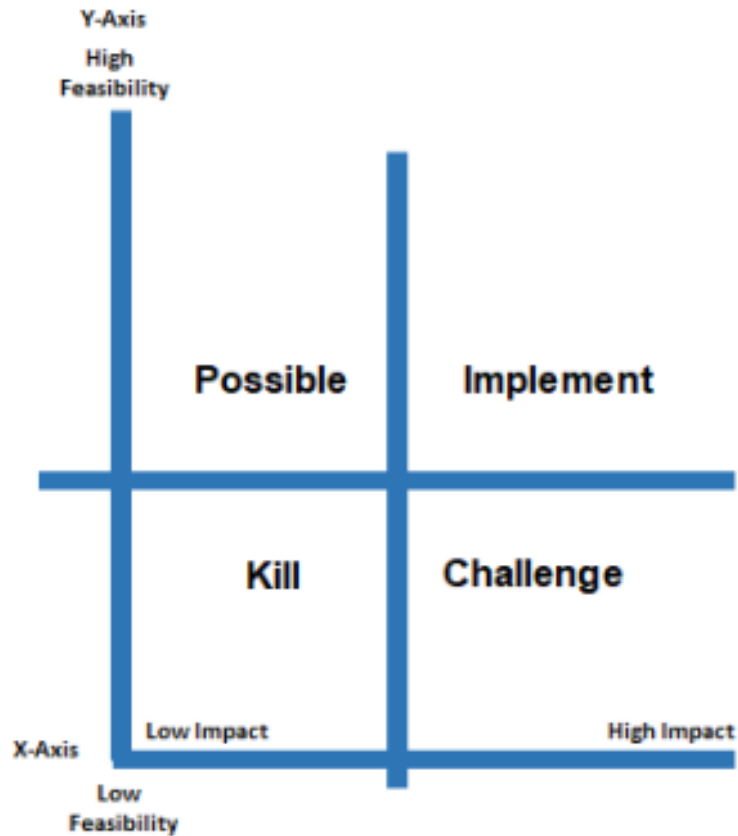
➔ Ensure facilitators are walking around during this entire process. Avoid side conversations: Engage with the participants.

STEP 2: AFFINITY DIAGRAM (CONVERGENT THINKING)



STEP 3: PICK CHART PRACTICAL APPLICATION

- Using the labels from the affinity clustering, utilize the PICK chart to determine impact and feasibility.



STEP 4: DETERMINE WHICH OPPORTUNITY THE GROUP WILL WORK ON

How to:

- A simple majority vote.
- Utilize Dotmocracy to decide.

CULMINATING EXERCISE

...uses all the skills participants have learned throughout the course and allows them to pitch their ideas for their opportunity statements.

CREATE A 2 MINUTE PITCH

- Oral presentation and one-story board
- Presentation is limited to 2 minutes.
- Every member of the team must have a speaking part in the presentation.

STEP 1: PRESENTATION DEVELOPMENT

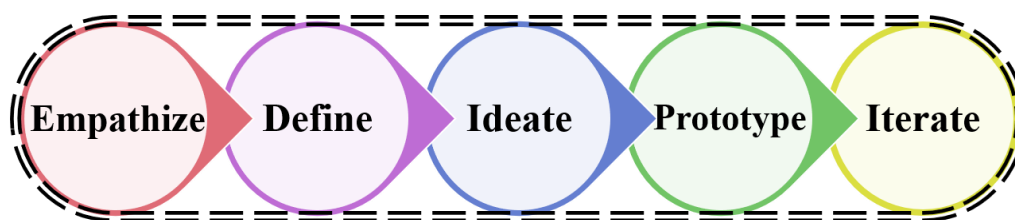
- Allow 15 - 20 minutes to start developing their pitch.
- Time is critical, most will not complete the task, which is intended. The purpose behind this is to stress the importance of presenting the ideas using the least amount of words that have maximum impact.

STEP 2: PRESENT THE DRAFT

- During their first pitch iteration, facilitators should provide feedback;
 - "I Like..."
 - "I wish..."
 - "I recommend..."

STEP 3: PRESENTATION REFINEMENT

- Allow ample amount of time for refinement.
- Encourage participants to present their pitch to other team members.



STEP 4: FINAL PRESENTATION

- Participants have 3 minutes to present their final presentations.
- Pointers to give on public speaking
 - Good volume when speaking
 - Face the audience
 - Ensure everyone in the group participates
 - Allow time for questions from the audience

FINAL PRESENTATION EXAMPLE

What is the Concept?

Making barracks life better

Who is it specifically for?

People that live in the barracks

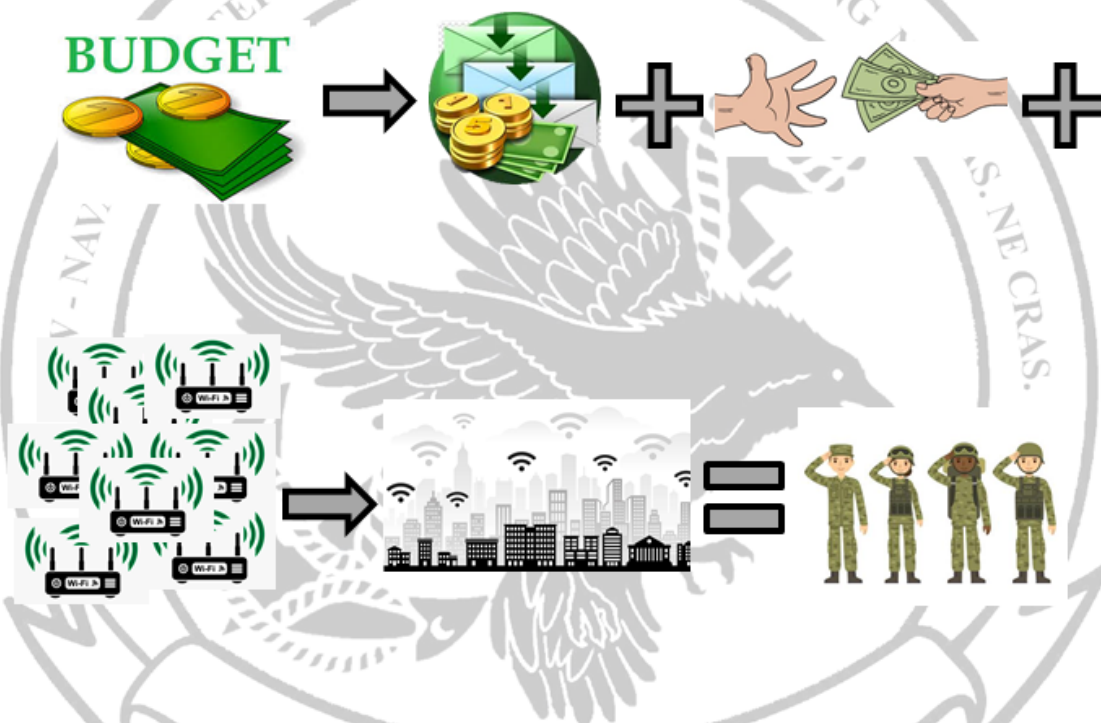
Problem statement:

How might we... Improve the quality of life for single Marines/sailors

BIG Idea:

Free WIFI

Illustrate / Write how it works... but seriously, draw some pictures.



Why might it fail?

Budget
Constraints
Covid

Minimum necessary supplies:

Wifi routers in each room

How can we measure success?

No free = fail
Free = happiness

How might we test this?

If approved, testing will not be required

What might full implementation look like?

More money in single peoples' pockets
Happier single people

COURSE CRITIQUE

ROSE – BUD – THORN

The course critique is an invaluable assessment used to adjust course materials and facilitation. Each member of the class is provided a total of 9 post it notes, divided evenly between red, blue, and green. Ask the students to provide a response to each category, in 3-5 words;

- **Red Roses:** Like
- **Green Buds:** Opportunities, whether or not they were present in any form
- **Blue Thorns:** Did not like. Improve!

HOW TO

- Provide approximately 15 minutes to complete. Once complete, drop all notes in a box and mix around. Make sure they understand that these will be anonymous.
- Prep butcher-block paper on the wall.
- Each participant will pull one sticky from the box, read out aloud and stick to the butcher-block paper. Wagon wheel. Repeat until all notes are on the wall.
- [If there's time: Cluster! Colors should end up mixed. What you'll see here is a heat map, with red (warm) being the things that are working best, blue (cold) being the things that need the most work, and green (for spring!) being the things that folks are most excited to see introduced. Use Sharpies to outline the different sections. Yellow stickies for cluster labels.]
- [If there isn't time: Do the clustering for them during lunch. Provide a reflection session before the afternoon, if possible.]
- Notes are retained IOT capture in final after action to requesting Host.
- Take a picture of the board.



BONUS MATERIAL



REMEMBER WHEN

Remember



That



Time



HOW TO:

There are two ways to do this icebreaker:

- one word at a time or
- one idea at a time.

This exercise is meant to develop your pitch skills and energy. This primes you for group collaboration and a mindset that builds off of each other's ideas.

ONE WORD

- This is more difficult than it sounds, especially with new students. If this is your first icebreaker as a group, start them with a seed story like Snow White & the Seven Dwarfs. Before they get started, make sure everyone is on the same page. Now build upon that narrative!
- Don't be surprised if gangsters manage to smuggle atomic bombs onto flying aircraft carriers in an attempt to rescue Snow White from aliens.

ONE IDEA

- Break into groups no larger than 5. Each group begins to tell a story which builds steadily upon the previous ideas shared by their group.
- Fictional account of what you remembered...

MARSHMALLOW CHALLENGE

HOW TO

Have each group go to a table set up with supplies. The facilitator should say the following to start this challenge:

"This is a competition. Your team must create the tallest, free-standing structure using the supplies provided on the table in front of you. The marshmallow must be on top. You will have approximately 15 minutes." (Repeat this phrase twice)

RULES

- Build the Tallest Freestanding Structure
- The Entire Marshmallow Must be on Top
- Use as Much or as Little of the Kit
- The Challenge Lasts 18 minutes

"Go!"

FACILITATOR SHOULD...

- Walk around the room and observe thought process, teamwork, and communication within the groups.
- Give teams a 1-minute warning. At the conclusion of the 15 minutes, call "TIME! HANDS OFF!"
- Once all groups step back from their structures, begin a short (2 minute) discussion regarding the challenge. Use your observations during the challenge to fuel this discussion. The following questions can be used:
 - What was your thought process in creating your structure?
 - Did you have a plan in the beginning?
 - Did you stick to it or did your plan evolve as your group began building it?
 - Did a leader come out of the woodwork?
 - Did everyone participate equally?
 - Do you think your structures would be better if we had given you an incentive?
 - Did anyone look at what other teams were doing to get inspiration?

Following the discussion, the class can watch a short video covering the Marshmallow Challenge. Brief discussion can follow the video. Ensure the facilitator has a good discussion point to encourage participation. Ex: "I found it so interesting that children did so much better than the adults. Why do you think that is?"

Finesse: Four things regarding this challenge. They need to know that this is 1) a competition. They are building the 2) tallest, 3) free-standing structure and 4) the marshmallow needs to be on top. As the groups begin creating their structures, they will inevitably have questions. Answer their questions as vaguely as possible. Ex: A group may ask, "Can we cut up the marshmallow?" A possible answer could be: "I told you the rules." If participants seem unhappy with your answers, explain that this exercise is meant to be vague and they can execute based on their interpretation of the rules you stated. At the end of the challenge, groups may have "cheated". Do not call them out as cheating. Ask them or the rest of the class something like, "Do you think this is freestanding?" If they obviously broke rules, say, "You get 1000 points for creativity, minus 38 stars for not quite following the rules!" Laugh and keep it light so participants don't feel as if anything was unfair.

EGG DROP CHALLENGE

HOW TO

Have each group go to a table setup with supplies. The facilitator should say the following to start this challenge:

“This is a competition. Each team has an equal number of supplies. You have 10 minutes to create a structure that will save your egg from breaking. When your 10 minutes are up, you will set your structure on the floor over here and we will begin the egg drop. The team that can drop their egg from the highest height without breaking it wins.”

RULES

- Using only the materials provide, create a structure that will save your egg from breaking.
- When finished, place the structure on the floor.
- The team that can drop their structure from the highest level without breaking their egg wins.
- Teams have 10 minutes to build.

“Go!”

FACILITATOR SHOULD...

- Walk around the room and observe thought process, teamwork, and communication within the groups.
- Give teams a 1 minute warning. At the conclusion of the 10 minutes, call “TIME! HANDS OFF!”
- Once all groups step back from their structures, begin a short (2 minute) discussion regarding the challenge. The following questions can be used:

“Tell me about your structure.”

- What was your thought process in creating your structure?
- Did you have a plan in the beginning?
- Did you stick to it or did your plan evolve as your group began building it?
- Did a leader come out of the woodwork?
- Did everyone participate equally?
- Did anyone look at any other table to get ideas from?

START THE CHALLENGE

- Following the discussion, have the groups line their structures on the floor along a wall. Use a piece of tape to create a line on the floor for them to use as a distance marker for dropping their egg. Have each team drop their egg at the same time.
- Continue increasing the height, moving your tape each time, until only one winner remains.
- Have a brief discussion on the exercise and how their structure may have changed if they could do it again. Discuss the iterative process and the improve-as-you-go mentality.

Finesse for Egg Toss Challenge:

As the groups begin creating their structures, they will ask questions. Answer their questions but keep your responses vague. Participants should execute based on their interpretation of the rules. Keep the energy level high during the egg drop by being animated and engaged. For insight into this type of exercise, watch the Marshmallow Challenge video on your own. You can pull lots of great points that also apply to this challenge.

This exercise provides a mental break before moving into convergent thinking.

- Tell participants to circle up.
- Step into the center of the circle and pose as a tree. Tell participants you are a tree in a Bob Ross painting.
- Ask for a volunteer to step into the circle with you and add to your picture. Your partner facilitator should step forward and add to your picture to help demonstrate the exercise, stating what part they are playing in the scene. Ex: a bush, a dog, a river, etc.
- Ask for two more volunteers to add to the picture so there are four people in the center of the circle. Keep control of the room by only allowing one person at a time.
- The original person then chooses two others to leave the picture with them, leaving only one person in the center maintaining their pose.
- Now the picture is only of the one person and it is an entirely new picture.
- Ask for three new participants to add to the picture.
- Continue creating new pictures until every individual has participated.

